



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

OFFICE OF THE
REGIONAL ADMINISTRATOR

APR 03 2018

The Honorable Roy Blunt
United States Senator
1123 Wilkes Boulevard, Suite 320
Columbia, Missouri 65201

Attention: Daniel Harre

Dear Senator Blunt:

Thank you for your inquiry of March 19, 2018, to the U.S. Environmental Protection Agency, Region 7, on behalf of your constituent Mr. Doug Campbell who wrote on behalf of Fantastic Caverns in Springfield. Mr. Campbell is concerned with why the Occupational Safety and Health Administration's workplace standard for trichloroethylene is different from the EPA's health-based values for TCE in indoor air.

Below is a short summary of the EPA's role in addressing TCE exposures, the current scientific basis for TCE exposure values, and the review process the EPA used in adopting guidance for TCE air exposures.

EPA's Health-Based Value for TCE

The EPA health-based benchmark for workers exposed to TCE in air is $6 \mu\text{g}/\text{m}^3$. This value is based on the "Toxicological Review of Trichloroethylene" that was published by the EPA Integrated Risk Information System program in 2011. This document is a comprehensive evaluation of the toxicological information available at that time. The EPA's Office of Land and Emergency Management recognizes an IRIS assessment as the official Agency scientific position regarding the toxicity of a chemical based on the data available at the time of the review. OLEM issued in 2003 a formal Directive stating that IRIS is generally the preferred source of human health toxicity values used to evaluate health risks at Superfund sites. This approach was re-affirmed in an August 2014 memorandum from the Superfund program. Thus, the data and approach used to derive $6 \mu\text{g}/\text{m}^3$ is consistent with the EPA guidance and long-standing practice.

The "Toxicological Review of Trichloroethylene" underwent extensive internal and external review. The final toxicological review incorporates comments by the National Academy of Sciences, two EPA Science Advisory Boards, the Office of Management and Budget, the Department of Defense, the National Aeronautics and Space Administration, internal EPA reviewers, and the public, among others. The Agency for Toxic Substances and Disease Registry has adopted the EPA's IRIS values in determining its Minimal Risk Levels for breathing TCE in air. The science and approach used to arrive at the $6 \mu\text{g}/\text{m}^3$ value is well established.

OSHA's Permissible Exposure Limits (PELs)

Most of OSHA's permissible exposure limits were issued shortly after the Occupational Safety and Health Act was adopted in 1970 and have not been updated since then. Their official website states



Superfund

4/3/18

0000

55

“OSHA recognizes that many of its permissible exposure limits (PELs) are outdated and inadequate for protection of worker health.... Industrial experience, new developments in technology, and scientific data clearly indicate that in many instances these adopted limits are not sufficiently protective of worker health” (<https://www.osha.gov/dsg/annotated-pels/>).

OSHA notes that many large industrial organizations have supplemented existing OSHA PELs with their own guidelines and recommends that employers consider using alternative occupational exposure limits. Although OSHA PELs are meant to be protective of worker health, they do not take into account the entire range of people who may be exposed including sensitive individuals, which the EPA’s health-based values do.

EPA’s Role and Authority

The EPA and OSHA each have distinct statutory responsibilities through the timely and effective implementation of a number of federal laws and implementing regulations. The EPA’s role is to protect human health in the case of environmental releases of contaminants.

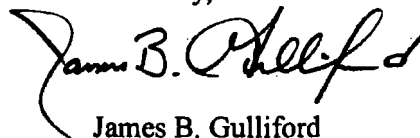
The source of TCE in air at Fantastic Caverns was determined to be the former Litton Systems site. Releases of TCE at the Litton Systems site migrated into the environmental subsurface and groundwater many years ago and ultimately into the air within Fantastic Caverns. The EPA’s health-based benchmarks are applicable for the environmental contamination at Fantastic Caverns.

Summary and Conclusion

Based on the most current science and long-standing policy, the EPA believes 6 µg/m³ TCE in air is the appropriate health-based benchmark for ensuring worker safety at Fantastic Caverns. The TCE found in indoor air at Fantastic Caverns was not created by the business operations at the cave, and the OSHA standards are not applicable to TCE exposures from an environmental release.

Again, thank you for your inquiry. If we can be of any further assistance, please feel free to contact me at 913-551-7006, or your staff may call LaTonya Sanders, Congressional Liaison, at 913-551-7555.

Sincerely,



James B. Gulliford